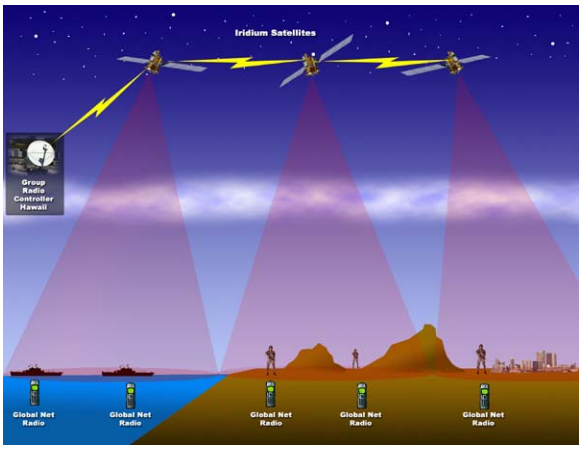
Expeditionary Tactical Communications System (ETCS)

Purpose: The Lab is developing the ETCS in order to examine command and control during *Ship to Objective Maneuver (STOM)* and to provide a prototype experimental capability for Sea Viking 04.

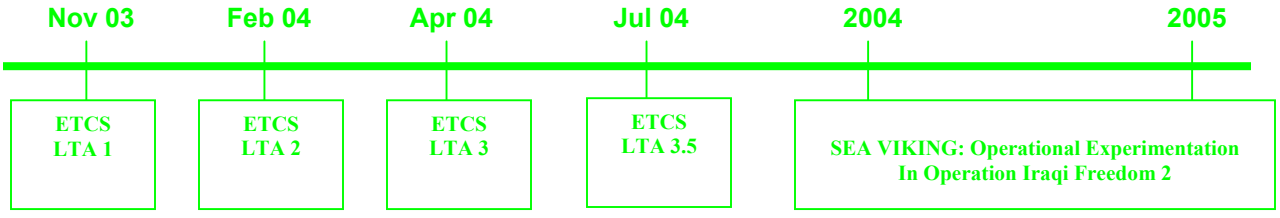


Background: There is a need in the Marine Corps for an Over the Horizon (OTH) and On the Move (OTM) communications capability to link tactical maneuver units and platforms with each other and back to fire support assets and the command element. The envisioned system must provide wide area 24/7 coverage, assured access at all levels in complex terrain, OTM capability, tactical level security and a robust network that does not need ground-based infrastructure. A tiered system architecture is needed to meet this requirement. This system architecture will potentially consist of a combination of tactical and high altitude unmanned aerial vehicles, and a near space segment (Low Earth Orbit (LEO) or Medium Earth Orbit (MEO) satellites). The requirement is addressed in the EMW Tactical Communications Relay Universal Needs Statement (UNS) #01082UA.

Description: ETCS is based upon the commercial IRIDIUM system, modified to provide a push-to-talk netted (one to many) voice and data capability. It will provide OTH and OTM communications between the seabased C2 nodes and elements ashore down to the dismounted company commander and reconnaissance team. This effort will include the integration of ETCS into Marine Corps C2 systems (IOS, AFATDS, DACT, etc.), to include OTM COC platforms to enable the passage of data in support of a common tactical database. In conjunction with the RSTA team, ETCS will also be integrated to link an unmanned ground sensor (UGS) to the seabase. ETCS will be installed on ships and at the conclusion of experimentation, the Lab will provide lessons learned and refined requirements statements to MCCDC for a long-term solution for MAGTF OTH communications.

Deliverable Products: Prototype system for operational experimentation in OIF 2 and requirements documentation.

Milestones:



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